MODULE 5: INTRODUCTION TO THE INCIDENT COMMAND SYSTEM

OBJECTIVES

The students will:

1. *Define the need for a management system to be used at emergency incidents and demonstrate how ICS can be applied as an effective emergency management system.*

2. *Define the five ICS functions, Command Staff positions, and Staging.*

3. *Define the role of the Incident Commander (IC) and the importance of the CO as initial IC.*

4. *Given a scenario, establish an effective ICS organization to manage the initial phase of the incident.*

NOTE-TAKING GUIDE

NEED FOR A MANAGEMENT SYSTEM

Successful organizations are managed in a professional manner.

Elements of an effective incident management system.

ICS as a management system.

HISTORY OF ICS

Originated as a result of major wildland fires in Southern California during the 1970's.

Fireground Command (FGC).

NOTE-TAKING GUIDE

National Fire Academy (NFA) model system.

Each emergency management system based on sound management principles.

DEVELOPMENT OF REGULATIONS AND STANDARDS

Success of ICS has led to its inclusion in a variety of regulations and standards.

Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) require use of ICS for hazardous materials incidents.

NFPA Standard 1500: Fire Department Occupational Safety and Health Program.

NOTE-TAKING GUIDE

NFPA Standard 1561: Fire Department Emergency Management Systems.

USING ICS EFFECTIVELY

Understanding how to use the system.

Think of ICS organization as a toolbox.

Importance of first-in officer as initial IC.

The CO's role when not the IC.

NOTE-TAKING GUIDE

THE FIVE ICS FUNCTIONAL AREAS

Total ICS organization includes five functional sections.

Command.

Operations.

Planning.

Logistics.

Finance/Administration.

NOTE-TAKING GUIDE

Command, Operations, Planning, Logistics, and Finance/Administration comprise the General Staff positions.

COMMAND STAFF POSITIONS

Command Staff positions are designed to provide aid and assistance to help the IC fulfill incident responsibilities.

Command Staff positions:

Safety Officer: Responsible for monitoring and assessing safety hazards or unsafe situations and developing measures for ensuring personnel safety.

Liaison Officer: Responsible for providing the point of contact and coordination for assisting agencies not involved in command functions.

NOTE-TAKING GUIDE

Information Officer: Responsible for the development of accurate and complete information regarding the incident and to serve as the point of contact for the media and other appropriate agencies requiring information direct from the incident scene.

STAGING

Definition: Staging is the location to which resources report until given an assignment.

Increases accountability.

Staging Area Manager: Responsible for managing all activities within the Staging area.

NOTE-TAKING GUIDE

THE INCIDENT COMMANDER'S ROLE

Safe and effective incident operations require that someone be in command.

The CO's responsibility as initial IC.

DIVISIONS AND GROUPS

Establishing Divisions or Groups.

Relationship between Divisions and Groups.

Managing Divisions and Groups.

NOTE-TAKING GUIDE

Responsibilities of Division and Group Supervisors.

SUMMARY

The Incident Command System is a **management** system that uses proven management principles.

It provides the IC with the tools he/she may need if the incident demands and there is a need to maintain span of control.

ICS is a system designed to be used at any type incident and by all responders.

It is suitable for "everyday" use and can expand in a modular fashion to larger incidents.

Company officers **must** understand the system and their role if they are to be effective and make the system work.

NEED FOR A MANAGEMENT SYSTEM

Successful organizations do not happen by chance or blind luck. Success requires dedication and professional management on the part of those responsible for the organization's achievements. Lack of good management can have disastrous results. This is true in any organization whether it be business, military, team sports, or the fire service. Some examples are:

Business success: Any Japanese car maker
Notable business failure: Edsel

Military success: Operation Desert Storm
Notable military failure: Iraqi Army/Navy/Air Force

Sports success: Vince Lombardi as coach of the Green Bay Packers
Notable sports failure: 1961 New York Mets

Firefighting success: Your last fire
Notable firefighting failure: First-in company to Mrs. O'Leary's cow, Chicago 1871.

Successful incident management is not totally unlike a team sport such as football. In football the coach puts together the game plan the players are to follow rather than each player deciding on his own where to run and whom to block. Managing emergencies requires that an IC determine the plan that others will follow. Not all football players have the same skills. Running backs, linemen, and wide receivers each have different skills. The same can be said for those who function at an emergency. Law enforcement, fire, EMS, public works, and social agencies all may be required at the same incident and each needs to concentrate on its area of expertise if it is to be effective. If a team or a fire department is to perform to its highest level, it must be well trained, well conditioned, and well managed.

The consequences of a football team not having good leadership and not playing together in a coordinated manner may result in losing a game. Should an emergency incident suffer from lack of leadership and coordination of efforts, the results could be loss of life or injury to civilians and firefighters, additional damage to the property, and failure of those responsible to provide their communities with the level of service they deserve and expect.

Unlike other organizations, emergency response agencies must fulfill their responsibilities under conditions that are hazardous and often confusing.

While other organizations can take the time to form a committee to study a problem, decisions at the emergency scene must be made based on limited information and under severe time restrictions. Just because an emergency exists does not relieve those responsible for managing the emergency from doing so in a professional manner. Because of the risks and dangers involved, the need for effective incident management is greater than in other organizations.

Elements of an Effective Incident Management System (IMS)

For an IMS to be effective, it should share some common elements. Those elements include:

1. Suitability for use regardless of jurisdiction or agency involved.

2. Ability of the organizational structure to adapt to an incident regardless of type of complexity.

3. Applicability and acceptability to users throughout the community and region.

4. Readily adaptable to new technology such as computers or improved communication capabilities.

5. Expandable in a logical manner from initial response to a major emergency so as not to have one plan for "everyday" use and a separate plan for "the big one."

6. Basic common elements in organization, terminology, and procedures.

7. Cause the least possible disruption to the existing system during implementation.

8. Fulfill the above requirements effectively and simply to ensure low operation and maintenance costs.

ICS as a Management System

ICS meets the requirements of an effective incident management system in a manner that makes its use practical to all emergency response agencies. In doing so ICS:

1. Provides for manageable span of control.

   Definition: Span of control is the number of subordinates one supervisor can manage effectively.

A basic management axiom states that for managers to be effective they must limit the number of subordinates they supervise to a manageable level. Experience has shown that a workable span of control is somewhere between three and seven, with an optimum of five. ICS provides an organizational structure that allows managers to delegate responsibility when they are approaching or have reached the limits of their span of control.

2. Ensures unity of command so that all personnel are managed and accounted for.

   Unity of command means that each individual participating in the operation reports to only one supervisor. This eliminates the potential for individuals to receive conflicting orders from a variety of supervisors, thus increasing accountability, preventing freelancing, improving the flow of information, helping with the coordination of operational efforts, and enhancing firefighter safety.

3. Provides a standard set of terms for communicating designation of resources and facilities.

   ICS uses plain English rather than 10-codes to communicate. Called clear text, it uses a standard set of words and phrases in lieu of the sometimes confusing and conflicting 10-codes. ICS also offers a set of standard resource designators to identify the range of resources and facilities that may be needed at an incident.

   Examples of clear text and standard resource designators can be found in the materials of the ICS classes offered by the National Fire Academy, the National Interagency Incident Management System (NIIMS), manuals offered by Fire Service Publications at Oklahoma State University, as well as other sources.

4. Lines of authority provide for lines of communication.

   Based on the simple principle that communications follow the same lines as the organization, the amount of communication is minimized and also limits the number of individuals needing to talk to each other. This improved flow of communications prevents messages from being missed by those for whom they should be intended.

5. Has all-risk design.

   ICS can be adapted to any type of emergency whether it be fire, mass casualty, hostage situation, natural disaster, or any other type of emergency. Because it can be used by all agencies involved in the incident, coordination and communications are improved and the amount of confusion reduced.

6. Is suitable for "everyday" use.

   Many departments, agencies, and jurisdictions have disaster plans that are used only when a major incident occurs. These plans are often out of date, inappropriate to the emergency, and not understood or trained on by those not involved with drawing up the plan.

   ICS can be used every day at every incident and eliminates the need to have different management systems for different sizes or types of emergencies.

7. Provides for safety of personnel.

   Span of control and unity of command assure that personnel are accounted for and their efforts are coordinated in a manner that provides for firefighter safety. Improved communications and reduced confusion also facilitate protecting their safety.

8. Provides for modular expansion.

   As the incident grows or additional resources become available, the ICS organization can expand in a modular fashion to meet the demands of the emergency and still allow for maintaining effective span of control.

9. Improved resource utilization.

   With a clear organizational structure, each resource can concentrate on its assignment and eliminate duplication of effort. This maximizes the effectiveness of each resource.

HISTORY OF THE INCIDENT COMMAND SYSTEM

In the early 1970's, Southern California experienced several devastating wildland fires. The overall cost and loss associated with these fires totaled $18 million per day. This multijurisdictional disaster was the impetus for

the development of an improved interagency incident management system known as the Incident Command System (ICS). ICS is one of the beneficial results of a federally funded project called FIRESCOPE that was convened after these fires, and whose charter was to examine various aspects of interagency response to incidents.

FIRESCOPE derives its name from: **FI**re **RES**ources of **C**alifornia **O**rganized for **P**otential **E**mergencies. The FIRESCOPE ICS is primarily a command and control system delineating job responsibilities and organizational structure for the purpose of managing day-to-day fire and rescue operations. It also is flexible enough to manage catastrophic incidents involving thousands of emergency response and management personnel.

The National Inter-Agency Incident Management System (NIIMS) is another system using ICS that was developed by the wildland community in order to provide a common system for wildland fire protection agencies at the local, State, and Federal levels. The NIIMS organization includes the Bureau of Land Management, the Bureau of Indian Affairs, the U.S. Fish and Wildlife Service, the U.S. Forest Service, representatives of State Foresters, and the National Park Service. NIIMS consists of five major subsystems that collectively provide a total systems approach to risk management:

- The ICS which includes operating requirements, eight interactive components, and procedures for organizing and operating an onscene management structure.

- Training that is standardized and supports the effective operations of NIIMS.

- A qualification and certification system that provides personnel across the Nation with standard training, experience, and physical requirements to fill specific positions in the ICS.

- Publications management that includes development, publication, and distribution of NIIMS materials.

- Supporting technologies such as orthophoto mapping, infrared photography, and a multiagency coordination system that supports NIIMS operations.

Since the development of the ICS, the fire service has experienced several challenges in understanding its application. As a result, inconsistencies in the system began to develop; other hybrid systems came into existence, further distancing a common approach to incident command. A single

incident management system is critical for effective command and control of major incidents. At these incidents, a single department may interface with other agencies on the local, State, and Federal level. In order to reduce the inherent confusion that may be associated with larger scale incidents, using a common command system is a must.

Recognizing the challenges that were occurring in the fire service in applying a common approach to incident command, the National Fire Service Incident Management System Consortium was created. Developed in 1990, its purpose is to evaluate an approach to developing a single Command system. The Consortium consists of many individual fire service leaders, representatives of most major fire service organizations, and representatives of Federal agencies including FIRESCOPE. One of the significant outcomes of the work done by the Consortium was the identification of the need to develop operational protocols within ICS, so that fire and rescue personnel would be able to apply the ICS as one common system. In 1993, as a result of this, the IMS Consortium completed its first document: *Model Procedures Guide for Structural Firefighting*. FIRESCOPE adopted this in principle as an application to the Model FIRESCOPE ICS. The basic premise is that the organizational structure found in the FIRESCOPE ICS now is enhanced with operational protocols that allow the Nation's fire and rescue personnel to apply the ICS effectively regardless of what area in the country they are assigned. The National Fire Academy (NFA), having adopted the FIRESCOPE ICS in 1980, has incorporated this material in its training curriculum and will continue to reach the thousands of fire service personnel with one common incident command and control system.

It is important to note that the FIRESCOPE Model ICS has had other applications or modules similar to the structural firefighting applications that have been in place for some time. These create a framework for other activities to operate in and further enhance the use of ICS. As an example, there are the Multi-Casualty, Hazardous Material, and the Urban Search and Rescue applications.

The Federal Emergency Management Agency (FEMA) formally adopted FIRESCOPE ICS as the incident management system for any Federal response required by the agency. Since then, several other Federal agencies have adopted FIRESCOPE ICS.

DEVELOPMENT OF REGULATIONS AND STANDARDS

The success and acceptance of ICS nationally have led to its inclusion in a number of regulations and standards. The primary reason for this is ICS's ability to be adopted and utilized by jurisdictions and agencies needing

one common emergency management system capable of dealing with all types of emergencies and suitable for use when multiple jurisdictions or agencies are involved.

Occupational Safety and Health Administration (OSHA)

As a result of the Superfund Amendments and Reauthorization Act (SARA) of 1986, OSHA has implemented regulations that require departments in states that have adopted OSHA standards to use an ICS at all hazardous materials incidents.

Environmental Protection Agency (EPA)

For those departments in states that do not require following OSHA standards, the EPA has adopted regulations that impose the same requirements in non-OSHA states.

The regulation states, "The incident command system shall be established by those employers ("employers" includes fire departments) for the incidents that will be under their control and shall be interfaced with the other organizations or agencies who may respond to such an incident."

NFPA 1500

The NFPA Standard 1500: Fire Department Occupational Health and Safety Program states that all departments shall establish written procedures for ICS, and that all departmental members shall be trained in and familiar with the system. It fixes responsibility for firefighter safety at all supervisory levels at an incident and requires a method of tracking and accounting for personnel. It places strong emphasis on scene safety and the role of the incident safety officer.

NFPA 1561

The NFPA Standard 1561: Fire Department Emergency Management Systems provides broad guidelines for what should be included in any emergency management system; the appendix gives examples of successful systems currently in use. It does not provide a new emergency management system or impose rigid rules for adoption.

USING ICS EFFECTIVELY

ICS offers ample opportunity to delegate responsibility and create subordinate positions to maintain span of control. Emergency managers can develop an extensive incident organization, but the cold hard fact is that organizational charts do not put out fires. That is done through the efforts of hard-working, well-managed firefighters. The positions within ICS are there to be utilized **if** they are needed and will assist in better organizing and managing the incident.

ICS can be looked at as being similar to a toolbox. Just as a toolbox may be loaded with different tools, ICS has a number of positions in its arsenal. If you were to change the spark plugs in your car, you would not need to use every tool in the box but would only use those necessary to do the job. The remainder of the tools would remain in the box until there was a job for which they were needed. The same is true of ICS. Only those positions that are needed to help get the job done should be implemented. The others remain available for an incident in which they may be required.

Just as failure to delegate can cause a manager to exceed a reasonable span of control and produce disastrous results, so can falling into the trap of a manager creating a magnificent organizational chart with a variety of subordinate positions and having no one left to fight the fire. Understanding the system will let you know what positions can best aid in managing the incident and how they can be used to your best advantage.

Although the first-arriving officer may act as the initial Incident Commander until command can be passed, there is a strong likelihood he/she may be reassigned to another subordinate position in the ICS organization. Other officers who are not first-in may be assigned to a subordinate position upon their arrival. Whether the CO must function as the initial IC or is delegated to function in another ICS position, it is imperative that COs understand the system. Failure to do so can jeopardize firefighter safety and lead to a breakdown in coordination.

THE FIVE ICS FUNCTIONAL AREAS

ICS uses the five major components that make up most successful organizations. ICS is broken down into the functional areas of:

1. Command.

2. Operations.

3. Planning.

4. Logistics.

5. Finance/Administration.

Functions of Command

The functions of Command include

- assume and announce Command, and establish an effective operating position (Command Post (CP));
- rapidly evaluate the situation (sizeup); and
- initiate, maintain, and control the communications process.

Identify the overall strategy, develop an Incident Action Plan (IAP), and assign companies and personnel consistent with plans and Standard Operating Procedures (SOP's).

- develop an effective incident command organization;
- provide tactical objectives;
- review, evaluate, and revise (as needed) the IAP;
- provide for the continuity, transfer, and termination of Command; and
- provide for safety and personnel accountability.

The Incident Commander (IC) is responsible for all these functions. As Command is transferred, so is the responsibility for the functions. The first five functions must be addressed immediately from the initial assumption of Command.

Staffing Operations

The Operations Section is responsible for the direct management of all incident tactical activities, tactical priorities, and the safety of personnel working in the Operations Section.

The most common reason for staffing Operations is to relieve the span-of-control problems for the Incident Commander (IC). These span-of-control problems occur when the number of branches, divisions, and groups, coupled with Planning and/or Logistic Section elements, exceeds the IC's ability to manage effectively. The IC then may implement the Operations Section to reduce the span-of-control, transferring the direct management of all tactical activities to the Operations Section. The IC then is able to focus attention on the overall management of the entire incident as well as interact with the Command Staff and General Staff.

A complex incident, in which the IC needs assistance determining strategic goals and tactical objectives, also may require implementing Operations.

However, Operations should be staffed only to improve the management of the incident. If it is not used to maintain a manageable workload or an effective span-of-control, the IC could end up with a span-of-control of one.

After Operations is implemented, the duties of the IC are modified slightly. Operations will be responsible for all tactical operations, resources, and accomplishment of specific activities. The IC will be responsible for the development of the incident strategy and the communication of that strategy to the Operations Section Chief.

Planning

The **Planning** function is to collect and evaluate information that is needed for preparation of the action plan. Planning forecasts the probable course of events the incident may take and prepares alternative strategies for changes in or modifications to the action plan.

Logistics

Logistics can be described as filling the "Supply Sergeant" role for the incident. Logistics provides services and supplies in support of the tactical operations. Included in Logistics' responsibilities are providing for facilities, transportation, supplies, equipment maintenance and fueling, and feeding and medical services for response personnel.

Responder Rehabilitation

Responder rehab should be considered by the Incident Commander (IC) during the initial planning stages of an emergency response. However, the climatic or environmental conditions of the emergency scene should not be the sole justification for establishing responder rehab. Any activity/incident that is large in size, long in duration, and/or labor intensive will deplete the energy and strength of personnel rapidly, and therefore merits consideration for responder rehab.

A critical factor in the prevention of heat injury is the maintenance of water and electrolytes. Water must be replaced during exercise periods and at emergency incidents. During heat stress, the member should consume at least 1 quart of water per hour. The rehydration solution

should be a 50/50 mixture of water and a commercially prepared activity beverage, administered at about 40°F (4.4°C). Alcohol, caffeine, and carbonated beverages should be avoided, as they interfere with the body's water conservation mechanisms.

Food should be provided at the scene of an extended incident of 3 or more hours' duration. A cup of stew, soup, or broth is highly recommended because it is digested much faster than sandwiches and fast food products. Fatty and/or salty foods should be avoided.

The "two air bottle rule," or 45 minutes of work time, is recommended as an acceptable level prior to mandatory rehabilitation. Members shall rehydrate (at least 8 ounces) while self-contained breathing apparatus (SCBA) cylinders are being changed. Firefighters, having worked for two full 30-minute-rated bottles, or 45 minutes, shall be placed immediately in responder rehab for rest and evaluation. Rest shall not be less than 10 minutes and may exceed an hour as determined by the responder rehab manager. Crews released from Rehab shall be available in Staging to ensure that fatigued members are not required to return to duty before they are rested, evaluated, and released by the responder rehab manager.

Members in the rehab area should maintain a high level of hydration. Members should not be moved from a hot environment directly into an air-conditioned area, because the body's cooling system can shut down in response to the external cooling.

Emergency Medical Services (EMS) should be provided and staffed by the most highly trained and qualified EMS personnel on the scene (at a minimum of basic life support (BLS) level). The heart rate should be measured for 30 seconds as early as possible in the rest period. If the member's heart rate exceeds 110 beats per minute, an oral temperature should be taken. If the member's temperature exceeds 100.6°F (38°C), he/she should not be permitted to wear protective equipment. If it is below 100.6°F, and the heart rate remains above 110 beats per minute, **rehabilitation time should be increased.** All medical evaluations shall be recorded on standard forms along with the member's name and complaints; they must be signed, dated, and timed by the responder rehab manager or his/her designee.

Members assigned to responder rehab shall enter and exit as a crew. The crew designation, number of crew members, and the times of entry and exit from the responder rehab area shall be documented on the company's check-in/checkout sheet. Crews shall not leave the responder rehab area until authorized by the responder rehab manager.

HEAT STRESS INDEX

Temperature ºF	Relative Humidity 10%	20%	30%	40%	50%	60%	70%	80%	90%
104	98	104	110	102	132				
102	97	101	108	117	125				
100	95	99	105	110	120	132			
98	93	97	101	106	110	125			
96	91	95	98	104	108	120	128		
94	89	93	95	100	105	111	122		
92	87	90	92	96	100	106	115	122	
90	85	88	90	92	96	100	106	114	122
88	82	86	87	89	93	95	100	106	115
86	80	84	85	87	90	92	96	100	109
84	78	81	83	85	86	89	91	95	99
82	77	79	80	81	84	86	89	91	95
80	75	77	78	79	81	83	85	86	89
78	72	75	77	78	79	80	81	83	85
76	70	72	75	76	77	77	77	78	79
74	68	70	73	74	75	75	75	76	77

NOTE: Add 10ºF when protective clothing is worn, and all 10ºF when in direct sunlight.

Humiture ºF	Danger Category	Injury Threat
Below 60º	None	Little or no danger under normal circumstances.
80º to 90º	Caution	Fatigue possible if exposure is prolonged and there is physical activity.
90º to 105º	Extreme Caution	Heat cramps and heat exhaustion possible if exposure is prolonged and there is physical activity
105º to 130º	Danger	Heat cramps or exhaustion likely, heat stroke possible if exposure is prolonged and there is physical activity.
Above 130º	Extreme Danger	Heat stroke imminent!

WIND CHILL INDEX

Wind Speed (MPH) \ Temperature ºF	45	40	35	30	25	20	15	10	5	0	-5	-10	-15
5	43	37	32	27	22	16	11	6	0	-5	-10	-15	-21
10	34	28	22	16	10	3	-3	-9	-15	-22	-27	-34	-40
15	29	23	16	9	2	-5	-11	-18	-25	-31	-38	-45	-51
20	26	19	12	4	-3	-10	-17	-24	-31	-39	-46	-53	-60
25	23	16	8	1	-7	-15	-22	-29	-36	-44	-51	-59	-66
30	21	13	6	-2	-10	-18	-25	-33	-41	-49	-56	-64	-71
35	20	12	4	-4	-12	-20	-27	-35	-43	-52	-58	-67	-75
40	19	11	3	-5	-13	-21	-29	-37	-45	-53	-60	-69	-76
45	18	10	2	-6	-14	-22	-30	-38	-46	-54	-62	-70	-78

	Wind Chill Temperature ºF	Danger
A	Above -25ºF	Little danger for properly clothed person
B	-25ºF/-75ºF	Increasing danger, flesh may freeze
C	Below -75ºF	Great danger, flesh may freeze in 30 seconds

REHAB UNIT COMPANY CHECK-IN/OUT SHEET

CREWS OPERATING ON THE SCENE: ____

____

Unit#	#Persons	Time In	Time Out			Unit #	#Persons	Time In	Time Out

Finance/Administration

Usually formally implemented during large-scale incidents, **Finance/Administration** is responsible for the required fiscal documentation needed and produced as a result of the emergency. Finance/Administration also provides financial planning and advice to the IC to aid in meeting any fiscal statutory requirements.

The functions of Command, Operations, Planning, Logistics, and Finance/Administration are referred to in ICS as the General Staff positions. When assigned, Operations, Planning, Logistics, and Finance/Administration report directly to Command. More detailed descriptions of the General Staff positions can be found in the NFA ICS classes and the NIMS manuals.

COMMAND STAFF POSITIONS

The Command Staff positions are designed to provide aid and assistance in helping the IC fulfill the responsibilities associated with managing the emergency. They handle key incident activities that enable the IC to concentrate on **managing** the incident. Command Staff are not part of the line organization and do **not** count when determining the number of positions under the IC's span of control.

The Command Staff positions are:

- Safety Officer.
- Liaison Officer.
- Information Officer.

Safety Officer

The **Safety Officer** is responsible for monitoring and assessing safety hazards or unsafe situations and developing measures for ensuring personnel safety. After identifying the hazards, the information is conveyed to the IC, and any necessary adjustments are made to the action plan. The Safety Officer should be appointed when the IC cannot adequately monitor hazards or unsafe conditions due to the size, complexity, or numbers of resources involved in the incident.

The Safety Officer can take **immediate** action to correct an unsafe act or practice or to remove personnel from the threat of imminent danger.

Whenever this is done, the Safety Officer needs to advise the IC and affected supervisors of the action and why it was taken. If there is not a threat of imminent danger, the Safety Officer should follow the normal chain of command to get the corrective action accomplished.

Anyone serving as the incident Safety Officer must have the requisite knowledge of the factors that could affect firefighter safety. If appointed at a structure fire, the Safety Officer needs to have a thorough understanding of fire behavior, building construction, and a clear perception of how the tactical operations are affecting the structure. At a haz mat incident, knowledge of the product(s) involved, how to deal with it/them, and the capabilities of the responders is necessary. Whatever the nature of the emergency may be, anyone given the responsibility of Safety Officer should have the background knowledge and a clear understanding of what dangers the incident can present to personnel.

Liaison Officer

An incident where multiple agencies are involved may require a **Liaison Officer** whose responsibilities are to provide the point of contact and coordination for assisting agencies not involved in the Command function. The Liaison Officer aids in coordinating the efforts of the other agencies and reduces the risk of their operating independently. Thus, each agency can do what it does best and can maximize the effectiveness of available resources.

Each agency should have an Agency Representative with whom the Liaison Officer can work. The Liaison Officer needs to make sure those representing the various agencies have decisionmaking authority. If they must contact someone else to get a decision for their agency, the delays that are caused can have an adverse effect on the incident.

Information Officer

The **Information Officer** is responsible for the development and release of accurate and complete information regarding the incident and to serve as the point of contact for the media and other appropriate agencies requiring information directly from the incident scene.

After getting an incident briefing from the IC, the Information Officer establishes an area for the media away from the Command Post and a safe distance from the incident. There the Information Officer will provide news releases, answer questions the media may have, arrange for tours or

photo opportunities of the incident from safe areas, and arrange for the media to speak with the IC if incident conditions allow.

STAGING

Without having clear procedures to direct them otherwise, some departments end up having all the responding vehicles massed in front of the involved structure. Access for other vehicles is often blocked, and the ability to move equipment to another location can be hampered, if not impossible. To prevent this from occurring, a Staging Area can be designated. **Staging is the location where resources report until given an assignment**. It should be located close enough to the incident that resources can respond immediately if given an assignment.

Companies often request assignments while en route to the incident and at a time when the IC may still be trying to determine the extent of the emergency. Radio traffic is usually at its peak and the IC still is trying to put the action plan together. If pressed for an assignment by incoming units, the IC may make a hasty decision not based on the incident needs, but rather yielding to the pressure to give the companies something to do. By establishing a Staging Area, responding companies have a location where they can report while awaiting an assignment and the IC gains time to determine how those companies can best be utilized.

Staging Increases Accountability

By reporting first to Staging, responders are prevented from taking a look at the conditions at the scene and picking a task that looks like the most fun or one they feel needs to be addressed. Should this "freelancing" be allowed to occur, coordination is lost and firefighter safety is put in jeopardy. The IC no longer has control of the action plan or the resources that are responsible for its implementation.

When resources report to Staging they are logged in and, when they receive their assignment, where they will be operating and who will be supervising them also are recorded. This greatly facilitates knowing where the resources are and what they are doing. This is of particular importance in departments where personnel respond in private vehicles. Volunteers, paid on-call, call-back personnel, or staff personnel often respond in private vehicles and present the additional problem of abandoning their vehicles near the scene and blocking access to emergency apparatus. An additional problem is that these individuals may go directly to the scene and into action without anyone knowing their

whereabouts. Personnel accountability is lost, and the ability to protect the safety of these individuals is greatly reduced.

Staging offers the opportunity to form crews that can be placed into service in an organized manner if the IC needs to provide relief or meet the incident goals.

Similar to the Command Staff positions, in that it serves a support role to Command, Staging does **not** count when determining the IC's span of control.

Staging Area Manager

Staging is under the direction of the Staging Area Manager whose responsibility is to manage all of the activities within the Staging Area. In a number of departments the first-arriving officer in Staging is designated as the Staging Area Manager until relieved or assigned.

The responsibilities of the Staging Area Manager include:

1. Keeping track of all resources coming into and out of the Staging Area.

2. Updating the IC as to the level of resources in Staging.

3. Maintaining a minimum level of resources if one has been determined by the IC.

4. Responding to requests for personnel and equipment at the incident.

If the incident is of a size or complexity such that the IC has appointed an Operations Chief, the Staging Area Manager no longer reports to the IC but works directly for the Operations Chief.

THE INCIDENT COMMANDER'S ROLE

When things are going badly and the flames are getting higher and the building smaller, a question that often comes up is "Who the hell is in charge here?" Too often the answer either is no one or multiple choice. Every incident requires that someone be in command to manage and provide for safe and effective operations. Something we all need to remember--if one of us does not assume command--the incident will.

The IC's role is to establish the strategy and tactics needed to control the incident and implement and manage the action plan that will allow the available resources to be successful. The IC has the ultimate responsibility for success or failure and for protecting the safety of the personnel.

As an incentive to delegating responsibility to maintain span of control, **whatever responsibilities the IC does not delegate, the IC retains**. Without delegating responsibilities and creating subordinate positions, the IC can quickly exceed an effective span of control.

The CO's Responsibility as Initial IC

In the previous modules the emphasis has been on developing and implementing an action plan. The importance of the first-in CO's responsibility to make good decisions upon arrival and with the initial assignments also has been stressed. A review of those responsibilities as the initial IC include:

1. Do a thorough size-up.
2. Identify strategy and select tactics.
3. Develop initial action plan.
4. Implement the action plan.
5. Coordinate incident resources.
6. Modify the action plan as necessary.
7. Call for additional resources if needed.
8. Maintain Command until it can be passed or transferred.
9. Be prepared to fill a subordinate position within the incident organization.

COMMAND OPTIONS

The first-arriving unit or member to assume Command of the incident has several command options, depending on the situation. If a Chief Officer, member, or unit without tactical capabilities (i.e., staff vehicle, no equipment, etc.) initiates Command, the establishment of a Command Post

(CP) should be a top priority. At most incidents, the initial Incident Commander (IC) will be a Company Officer (CO). The following Command options define the CO's direct involvement in tactical activities.

Nothing-Showing Mode: These situations generally require investigation by the initial arriving company while other units remain in a staged mode. The CO should go with the company to investigate while using a portable radio to command the incident.

Fast-Attack Mode: Situations that must be stabilized immediately require the CO's assistance and direct involvement in the attack. In these situations, the CO goes with the crew to provide the appropriate level of supervision. Examples of these situations include

- Offensive fire attacks (especially in marginal situations).
- Critical life safety situations (i.e., rescue) which must be achieved in a compressed timeframe.
- Any incident where the safety and welfare of firefighters are major concerns.
- Obvious working incidents that require further investigation by the CO.

Where fast intervention is critical, using a portable radio will permit the CO's involvement in the attack without neglecting Command responsibilities. The Fast-Attack mode should not last more than a few minutes and will end with one of the following:

- The situation is stabilized.
- The situation is not yet stabilized, and the CO may withdraw to the exterior and establish Command in a fixed location. At some time, the CO must decide whether or not to withdraw the remainder of the crew, based on the crew's capabilities and experience, safety issues, and the ability to communicate with the crew. No crew should remain in a hazardous area without radio communications capabilities.
- The situation is not yet stabilized, and the CO remains inside with the crew in a Combat/Command mode. This option is chosen when the officer can make a difference in the effectiveness of the crew.

- Command is transferred to another officer. When a Chief Officer is assuming Command, the Chief Officer may opt to return the CO to his/her crew, or assign him/her to a subordinate position.

Command Mode: Certain incidents, by virtue of their size, complexity, or potential for rapid expansion, require immediate strong, direct, overall Command. In such cases, the CO initially will assume an exterior, safe, and effective Command position and maintain that position until relieved by another officer. A tactical worksheet shall be initiated and used to assist in managing this type of incident.

If the CO selects the Command mode, the following options are available regarding the assignment of the remaining crew members.

- The CO may "move up" within the company, and place the company into action with the remaining members. One of the crew members will serve as the acting CO and should be provided with a portable radio. The collective and individual capabilities and experience of the crew will regulate this action.

- The CO may assign the crew members to work under the supervision of another CO. In such cases, the officer assuming Command must communicate with the officer of the other company and indicate the assignment of those personnel.

- The CO may elect to assign the crew members to perform staff functions to assist Command.

A CO assuming Command has a choice of modes and degrees of personal involvement in the tactical activities, but continues to be fully responsible for the Command functions. The initiative and judgment of the officer are of great importance. The modes identified are guidelines to assist the officer in planning appropriate actions. The actions initiated should conform with one of the previously mentioned modes of operations.

Transfer/Pass Command

Transfer of command: Command is transferred to improve the quality of the Command organization. The following information outlines a sample transfer of command process. The transfer of command procedures/guidelines must be predetermined by individual agencies for their use.

The fact that a higher ranking person has arrived on the scene does not necessarily mean that he/she is prepared to assume Command of the

incident. The person may or may not have knowledge of previous orders or a grasp of the current situation. Without a thorough briefing of the situation status (SITSTAT), the officer may compromise incident operations.

It is essential that a Standard Operating Guideline (SOG) for the transfer of command to a qualified person be developed and practiced within the organization. It is important to remember that Command is transferred in both directions: up as the incident escalates and down during the demobilization phase.

The best method of transferring Command is through a face-to-face meeting between the initial Incident Commander (IC) and the subsequent IC. In face-to-face conversation, the relieving IC is able to take full advantage of all communication media. Communication is more than just words; the pitch of the voice, facial expressions, hand gestures, and other body language assist greatly in conveying necessary information. The officer being relieved also can read the receiver's body language, helping him/her to see whether or not the message is understood.

The person being relieved of Command should review the tactical worksheet with the officer assuming Command. (A sample tactical worksheet is in the Appendix.) This sheet provides the most effective framework for transfer of command because, properly used, it outlines the location and status of personnel and resources. The person being relieved then should be reassigned to the best advantage of the officer assuming Command. Remember, as the relieving IC, you are at a disadvantage. You probably have not been on the scene long; some actions have taken place prior to your arrival, other actions have yet to take place, and you are in a catch-up mode. The information that you receive and retain is critical to your knowledge of the situation and the success of the next operational phase.

The second best method of transferring Command is by radio. However, because this is only spoken communication, radio transfer often leaves the relieving commander with information gaps and extends the time needed to "catch up" to the incident. Information gaps can lead to poor initial decisions and may affect firefighter safety.

The least desirable is a Command change without an information exchange. Use this method only when the other methods cannot be used. The new commander usually is at such an informational disadvantage that catch-up time is extended significantly.

As stated previously, it is critical that a briefing take place when Command is transferred. Such a briefing should include, as a minimum, the following information:

- Present incident status/conditions (rescue situations, injuries, hazards, etc.)
- An Incident Action Plan (IAP) (strategies and tactics being employed).
- Progress toward achieving incident objectives.
- Safety considerations, concerns, and conduct personnel accountability rollcall.
- Assignment/Deployment of companies and personnel operating on the incident.
- Projection of incident condition and additional resource needs.

Passing command: The initial IC has three options of personal involvement at the incident:

1. IC.
2. Combat--hands on.
3. Tactically involved commander.

Select the IC role when there are sufficient personnel to accomplish the initial high-priority tasks or when the initial officer's involvement will not resolve a critical incident priority. Two examples of the latter are a well-involved structure fire needing numerous hoselines to bring control, and no life hazards present, or a fire in a nursing home where 50 trapped persons may perish. In both of these examples, it is likely that the first-in officer's involvement in tactical operations will not affect the outcome significantly. Will the addition of the officer and a small amount of water extinguish the structure fire? Probably not. How many of the 50 lives can be saved by the addition of one additional person in the combat role? These types of incidents require immediate Command.

Choose the combat role when the first-in officer's involvement will resolve a critical incident priority. For example, a room-and-contents fire in a dwelling that can be extinguished with one hoseline. Only one firefighter is available to enter the structure with the hoseline. In this case, the first-in officer should assist the firefighter in advancing the hoseline into the dwelling and extinguishing the fire. When in the combat role, the first-in officer may pass Command to the officer on the next-arriving unit.

Passing Command is a process that alerts the next-arriving officer to be in the "order-giving" mode rather than the "order-receiving" mode immediately on arrival. This is an important alert. Instead of receiving an assignment and focusing on tasks, the focus changes to developing strategies and tactics, making assignments, coordinating tactical applications, scene safety, and a number of other mentally intensive tasks.

A unit not yet on the scene should be advised that it will assume Command on arrival. This allows the other unit leader time to change roles and get into the "order-giving" mode (a primary reason for passing Command in the first place). The new IC should not assume command until he/she is on the scene and declares so via radio and contacts the first-in officer who passed Command. This prevents a gap in the Command function which may create confusion and interrupt the continuity of Command. It also is recognized by most authorities that one cannot manage an incident until one is on the scene and should, therefore, not be accountable until then.

In addition, Command should be passed only one time (except under extraordinary conditions); otherwise free-enterprise firefighting may result as Command is passed from one unit to the next based on the arrival sequence. It is imperative that this, as well as the other parameters of passing/transfer of command, are stated clearly in a department policy, and that all personnel are familiar with that policy.

Strategic Level, Tactical Level, Task Level

Operational responsibilities of Command include three levels:

- strategic level--determines overall direction of the incident;
- tactical level--assigns operational (tactical) objectives; and
- task level--completes specific tasks assigned to companies.

The strategic level is a function of the Incident Commander (IC). The IC sets the overall plan and strategic priorities.

The tactical level is a function of the Operations Section Chief. Operations selects the tactical objectives and prioritizes the accomplishment of the objectives. When an Operations Chief has not been designated, the IC must perform the tactical-level responsibilities.

When, and if, the Planning Section is established, the strategic and tactical levels of the operation should become part of the information given to the Planning Section Chief. This is vital information for Planning, since the primary function of this section is evaluating the incident and forecasting incident needs. The Planning Section also must develop alternative plans that include strategic- and tactical-level information.

The task level is a responsibility of the Company Officer (CO) and the firefighters who are performing the individual tasks that achieve the tactical objectives.

Span-of-Control

Span-of-control refers to the number of personnel reporting to any given individual. Optimum span-of-control in the Incident Command System (ICS) is five, with an acceptable spread of two to seven. On a situation that is not yet under control, no one operating under ICS should have more than five personnel reporting to him/her.

Span-of-control ratios can be driven by a number of factors:

- Training/Experience level of subordinates--Poorly trained or less experienced personnel require more direct supervision, thereby lessening the number of subordinates one can manage effectively.

- Complexity of the incident--A haz mat incident may require more mental concentration, thereby leaving less time available to supervise personnel.

- Type or timeframe of the incident--The speed of operations may influence span-of-control. A fast-moving incident may require a tighter span-of-control with fewer divisions/groups in place, whereas, in a slower moving operation such as overhaul, the supervisor is less pressed for time for decisionmaking and therefore can manage more personnel/divisions/groups.

For span-of-control purposes, these functions are not counted as reporting to a supervisor: Safety Officer, Liaison Officer, Information Officer, and Staging Area Manager. In ICS, these positions are basically assistants to the Incident Commander (IC), or in the case of Staging, to the Operations Section Chief.

DIVISIONS AND GROUPS

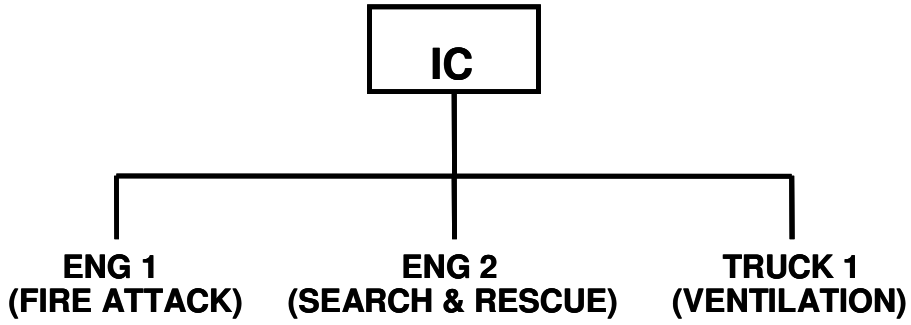
The terms division and group are common designators used by the U.S. fire service to define tactical-level management positions in the Command organization. Divisions represent geographic responsibilities such as Division C (the rear of the facility). Groups represent a functional (job) responsibility such as the Ventilation Group.

When initial assignments are ordered to incoming resources, the Incident Commander (IC) should begin assigning Company Officers (CO's) to

appropriate division and group responsibilities. By doing this at all small incidents, the department is preparing itself to manage effectively the resource-intense incidents that occur much more sporadically.

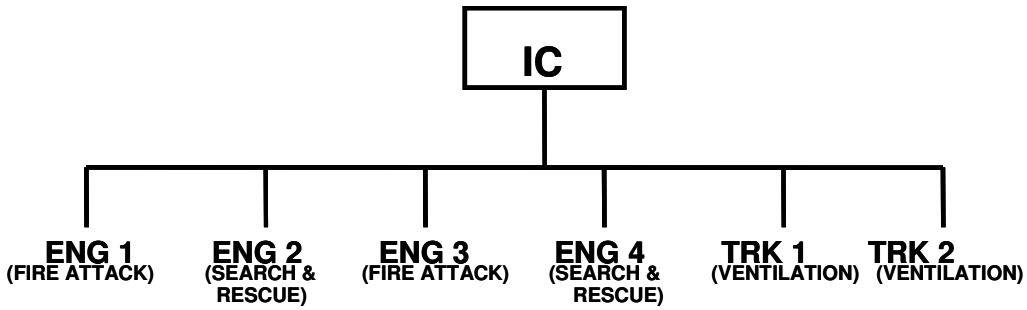
Note: The term sector is used by many departments in the United States. This term is generic and can be used to represent both geographic and functional responsibilities, such as Sector C and Ventilation Sector. The National Fire Academy (NFA), due to the need for consistency and application during activities and simulations and a prior agreement with FIRESCOPE, will use the terms division and group in all its courses.

Most incidents fire departments respond to can be handled by the assignments given to the initial responding units. A typical room and contents fire in a single-family residence could well be organized in the following manner:



This organization allows the IC to maintain span of control and effectively deal with incident management.

Problems arise when the number of companies involved in the tactical operations exceed the IC's span of control. In an expanding emergency the IC can become overloaded:



The IC's span of control is stretched to the limit and needs to create subordinate positions to get back to a manageable level.

Creating Divisions and Groups

The first-line position created by the IC is most often that of a Division and/or Group.

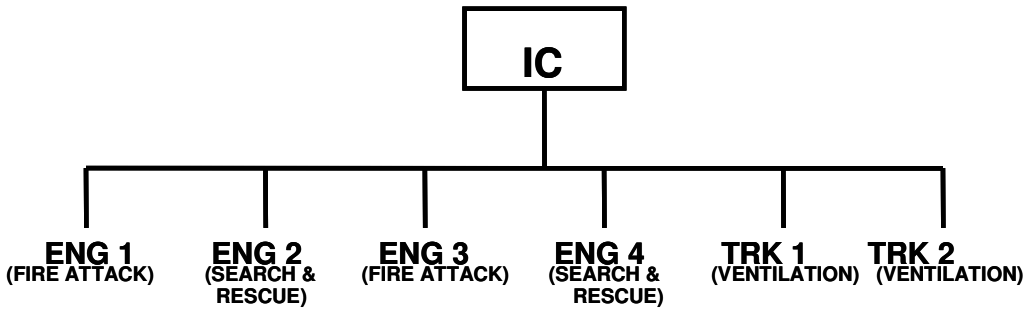
Divisions: An organizational level responsible for operations in a specified geographical area.

Example: A Division may be responsible for operations on a specified floor of a building or a specified side or area of a structure.

Groups: An organizational level responsible for a specified functional assignment.

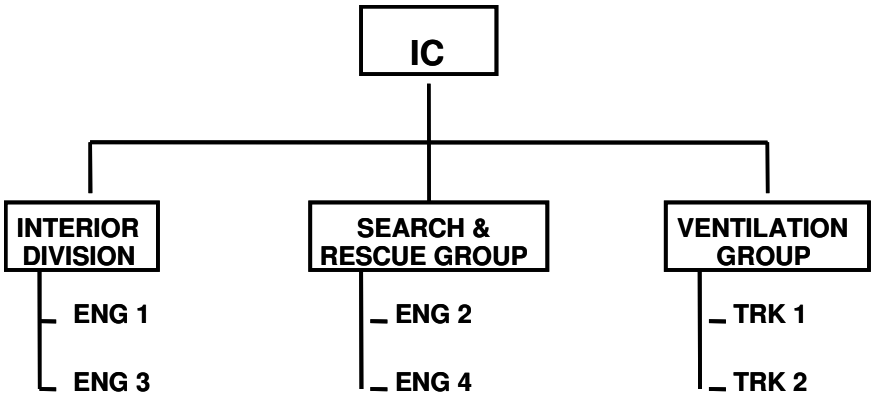
Example: A Group may be responsible for search and rescue or for ventilating in the entire structure.

Combining resources into Divisions or Groups allows the IC to reduce the number of individuals to be supervised and communicated with.



IC Exceeding Manageable Span of Control

Creating Divisions and Groups



IC Back to a Manageable Span of Control

Relationship Between Divisions and Groups

In the ICS organization Divisions and Groups function at the same organizational level. Divisions do **not** work for Groups and Groups do **not** work for Divisions.

Since Groups are responsible for a specified functional assignment in the entire structure, such as ventilation, their responsibilities may cross Divisional boundaries. When this occurs, the Division and Group Supervisors need to coordinate their efforts to assure they are not working at cross purposes and firefighter safety is being protected.

As Divisions are responsible for **all** tactical operations in their designated area not assigned to a Group, the Division Supervisor must be aware that if search and rescue needs to be accomplished, they are responsible for seeing it is performed.

Managing Divisions and Groups

Division and Group Supervisors are the ICS titles assigned to those who manage this key level of the organization. Division and Group Supervisors report directly to the IC unless the incident is of such a scale that an Operations Chief has been appointed. They would then work for and report to the Operations Chief.

The importance of CO's understanding the roles and responsibilities of Division and Group Supervisors cannot be overemphasized. Although the first-arriving officer may serve as the initial IC, there is a strong likelihood they could be reassigned to a Supervisor's role once Command has been passed or transferred. Those CO's who are not first in may well be

assigned to manage a Division or Group upon their arrival. For ICS to work as a management system, CO's **must** understand how important it is to the success of the tactical operations for the Divisions and Groups to be well coordinated and well managed. How well the CO's understand and utilize the system will have a dramatic impact on the chances for success.

When creating a Division or Group there is some important information the IC needs to pass on to the individuals who are assigned the supervisory positions. Three critical pieces of information are:

1. What area(s) they are responsible for and the tactics or objectives they need to accomplish.

   By giving them their areas of responsibility and their assigned objectives, the IC has set the boundaries that will aid in coordinating the incident activities, and the objectives will provide a job description the Supervisors will be expected to meet.

2. What resources they are being assigned to meet their objectives.

   When given their resources, the Supervisors will know whom they are to communicate with and the level of resources they will have available to complete their assignments.

3. Their radio designation.

   Make sure you know who you are talking to.

Responsibilities of Division and Group Supervisors

The first responsibility any supervisor in the ICS organization has is to ensure the safety of his/her assigned personnel. Division and Group Supervisors need to keep track of their assigned resources and know where they are and what they are doing at all times if they are to protect the firefighters under their supervision.

The Supervisors are responsible for implementing their assigned portion of the action plan. Doing so involves conducting an ongoing size-up of how effective the tactical operations are in meeting the assigned objectives and making the necessary adjustments if needed. Part of that size-up should include an evaluation of how long the personnel currently assigned can operate before needing relief. The Supervisor should anticipate this need so that personnel do not start dropping from exhaustion before relief is requested. The risk of death or injury to firefighters is increased dramatically if they are worked beyond their capabilities.

Communications between the IC (or Operations Chief if one has been assigned) needs to be ongoing. The IC needs to receive periodic updates as to how effectively the action plan is working and whether the assigned objectives are being met. Without this information the IC may be operating in an information vacuum and at a loss as to knowing whether the action plan is working or if it needs to be modified. The Supervisor should advise the IC if additional resources are required to meet the assigned objectives or whether resources can be released or reassigned. Division and Group Supervisors also need to communicate with each other to assure their tactical operations are being coordinated and firefighter safety protected.

RAPID INTERVENTION CREW

NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program,* requires having specifically designated rescue crews at the incident scene. This requirement is based on the realization that firefighters are exposed to the highest risk of injury or death while operating at the scene of an emergency and that one of the most effective mechanisms for reducing that risk is to have a Rapid Intervention Crew (RIC) ready to come to the assistance of emergency personnel should the need arise.

One of our primary concerns should be to reduce the risks that we and our firefighters are exposed to during emergency operations. It is not realistic, however, to assume that all the risks can be avoided, controlled, or eliminated from the firefighter's environment. We realize that danger is part of our work environment, and the possibility that things can go wrong always must be considered. Recognizing this possibility, we must make some provisions to assist members who find themselves in trouble.

An important aspect of incident management is to identify the risk characteristics of the situation and to evaluate specific risk factors that apply to each activity. A situation involving a high level of risk requires a greater commitment to rapid intervention for the rescue of emergency personnel should something go wrong. An interior fire in a small, single-story building presents a certain level of risk to the firefighters who enter to search for occupants and to extinguish the fire. While a situation may appear to be routine, there are still things that could go wrong and place firefighters in imminent danger. A flashover could envelop them in flames, a structural collapse could trap them, or a faulty self-contained breathing apparatus (SCBA) could cause a firefighter to run out of breathable air. In a small, single-story occupancy, the chances are fair that firefighters could extricate themselves from most situations if they are a short distance from an exit that leads directly to the exterior.

The same fire situation in a large building, in a basement or an upper floor, in the hold of a ship or in a high-rise building presents a much greater danger simply because, in these areas, the ability of individuals to rescue themselves is reduced by the distance they would have to travel to reach a safe area and the difficulties they might encounter along the way.

The risk also may be increased by the nature of the task in which firefighters are involved. Rescuing an unconscious worker from a confined space that is filled with toxic and flammable vapor is much more dangerous to rescuers than removing an unconscious person from a wrecked automobile on a city street. Both situations involve a degree of risk to the rescuers, but the nature and degree of the risks are very different.

The composition and placement of RIC's may be somewhat agency-specific, dictated by individual needs and resource availability. However, it is important that written procedures/guidelines be developed for the use of these crews, especially when they are performing exterior operations in support of interior crews. These written procedures also should include evacuation signals and guidelines for implementing evacuation and relocation of personnel from the area of danger. In addition, for agencies involved in auto/mutual-aid response, it is important to develop consistency among the participating agencies in the use of RIC's.

A RIC should consist of a minimum of two members, fully equipped with appropriate clothing, SCBA's, portable radio, and necessary tools to be effective. It also should monitor the tactical radio channel to maintain a complete and accurate understanding of operations and changing conditions as well as location of tactical personnel. This information should be documented on a tactical worksheet by a member of the RIC. In the early stages of an incident, RIC personnel may perform other functions, e.g., secure utilities, flake-out hoselines, work in the Command Post (CP). However, they must remain prepared to redeploy to perform rapid intervention functions. As the incident expands in size or complexity, personnel should be assigned as a **dedicated** RIC. Placement of the RIC may be dependent on the incident; for example, in a high-rise operation, the RIC should be located in Staging (two floors below the fire). In many other situations, a good location would be near the CP or close to Operations. It should not be located in a position that would interfere with CP operations. If the incident covers a large geographic area, more than one RIC may be required.

In a hazardous materials operation, the Entry Team Leader must ensure that there is an RIC of at least two personnel in the appropriate level of protection before the primary entry team accesses the hot zone. In a hazardous materials operation, this team is designated as the Backup

Team. The personnel of the Backup Team need to have the same level of required technical competency as the Entry Team. This includes the appropriate level of protection required for the material(s) involved.

While there is some flexibility in procedural issues regarding Rapid Intervention, it is paramount that whenever personnel are operating in positions or performing functions that would subject them to immediate danger in the event of equipment failure or other unexpected sudden event, at least one properly attired RIC must be available to provide assistance or rescue.

Rapid intervention procedures should not be confused with initial interior structural firefighting operations addressed in NFPA 1500. NFPA 1500 requires the presence of four personnel before beginning interior structural firefighting. Two members operate in the hazardous atmosphere, while the other two members are the rescue team outside the hazardous atmosphere. If there is an immediate life safety situation, rescue may be initiated, but members should evaluate carefully the level of risk that they would be exposed to by taking such actions. If it is determined that the situation warrants such action, incoming companies should be notified so that they will be prepared to provide necessary support and backup upon their arrival. When waiting to be deployed, members of the RIC may be assigned to other tasks, e.g., pump operator, initial Incident Commander (IC), as long as these other activities do not interfere with their ability to respond as an RIC.

Example: A chief officer with two engines and one truck is operating at a structure fire. A portion of the second floor collapses. That information is transmitted to the IC. At this point, a likely scenario is as follows:

- The IC activates a signal and, by radio, orders all personnel out of the building.

- A Personnel Accountability Report (PAR) is taken, and it is found that one member is missing. That member was last seen working near the collapse area.

The RIC Team is directed to enter the structure, quickly assess its stability, recover the missing firefighter, and remove the member from danger.

PROGRESS REPORTS

A fire department's communications guidelines should include communications necessary to gather and analyze information to plan, issue orders, and supervise operations. For example, a tactical-level officer should communicate the following:

- assignment completed;
- additional resources required;
- unable to complete the assignment;
- special information;
- Personnel Accountability Report (PAR); and
- operational location.

It is important for the Incident Commander (IC) to understand what is happening at an incident scene. Once orders are given to Company Officers, group/division supervisors, or branch directors, feedback is critical to that understanding. The items listed above allow the IC to understand effectively to what point the various operations have progressed. Through these reports, the IC can track what has been done or completed, what additional resources will be needed for any given assignment, when tactics have to be changed or modified to overcome an impossible task, and what special factors, safety and otherwise, need to be involved in the assignments.

Progress reports are essential to incident management. They allow for effective decisionmaking and assist in prioritizing the commitment of resources. Progress reports allow for effective refinement and revision of the action plan. To be effective, progress reports need to be timely, complete, and concise.

Progress reports should detail briefly where and what actions have been completed and where and what actions are being undertaken. For example, a Vent Group Supervisor directed to do vertical and horizontal ventilation may provide a progress report as follows:

> Vertical ventilation will be completed in about 5 minutes. Horizontal ventilation of the fire floor is completed. Ventilation of the floor above is just beginning.

Progress reports will occur with greater frequency in the early stages of an incident, typically every 5 to 15 minutes, or as major parts of the job are completed. An IC or Operations Section Chief must request progress reports from subordinate personnel on a periodic basis, when these reports are not given by those personnel. Some departments have the dispatch center announce time on location every 15 minutes to assist the IC with time tracking and to act as a mind-jogger for the progress reports. It is important to ensure that if time tracking is done that emergency communication procedures are not overridden by these reports.

In catastrophic events, using large numbers of resources and a large ICS organization, it is critical that the progress of operations be conveyed to all General Staff functions on a timely basis. Branch directors must query

their subordinate group and division supervisors frequently as to the state of their operations. This information must be transmitted to the Operations Section Chief and upward to the IC.

Without the progress report information, the IC, as well as Operations and Planning, will find their information processing ability lessened. They often will initiate or recommend actions that are unneeded as well as untimely for the situation.

INCIDENT SCENE ACCOUNTABILITY

All officers holding positions within the Command organization are responsible for the welfare and accurate accountability of all assigned firefighters. Several fireground accountability systems have been developed by various fire departments around the country. While these may vary in overall design, there are common elements of personnel accountability that fire departments should apply at emergency incidents to fully account for their personnel. These common elements are

- required use;
- hardware--nametags/documentation;
- point-of-entry control of nametags;
- accountability officers;
- benchmarks for required rollcalls throughout operations;
- plans for describing the Command organization response to reports of lost firefighters; and
- use of Rapid Intervention Crews (RIC's).

Whatever the design, the system must be able to locate every firefighter within a small geographic work area within the hazard zone at any moment in time. Further, the system must be able to determine if a firefighter is delayed from an assignment, initiate an immediate rescue effort, if indicated, and fully integrate into the Incident Command System (ICS). **All fire departments are strongly encouraged to develop and implement a workable accountability system for their department.** The final product should be compatible with metro-area or regional accountability system.

SUMMARY

The Incident Command System is a **management** system that uses proven management principles. It has been proven effective by agencies and jurisdictions across the country as a system that can be used by all responders to any type of emergency. It provides the "tools" an IC needs

to be an effective manager and to protect personnel safety. Not only is ICS an emergency management system to be used at a major incident, but also one that is suitable for "everyday" use, which makes it even more valuable when you have "the big one."

The key to any system is how well those who are expected to use it understand it and how they can best employ it to their advantage. For ICS to be effective in your department and in your jurisdiction, **you** as the CO or prospective CO need to know how you can fulfill your responsibilities as a key player in the ICS organization.

Activity 5.1

Application of the ICS

Purpose

The purpose of this activity is to apply ICS to a scenario for which you already have performed size-up, identified strategy and tactics, determined unit assignments, and developed an ICS organization appropriate to the incident and response level.

Directions

1. Refer to the easel pad sheets you have used in the previous modules to identify problems, develop your strategy and tactics, and determine assignments for your assigned scenario. Based on the problems you have identified and the action plan you developed, list on a separate easel pad sheet the ICS organization you would use to manage the incident.

2. Make sure your organization addresses the strategy and tactics you developed, span of control, unity of command, and firefighter safety.

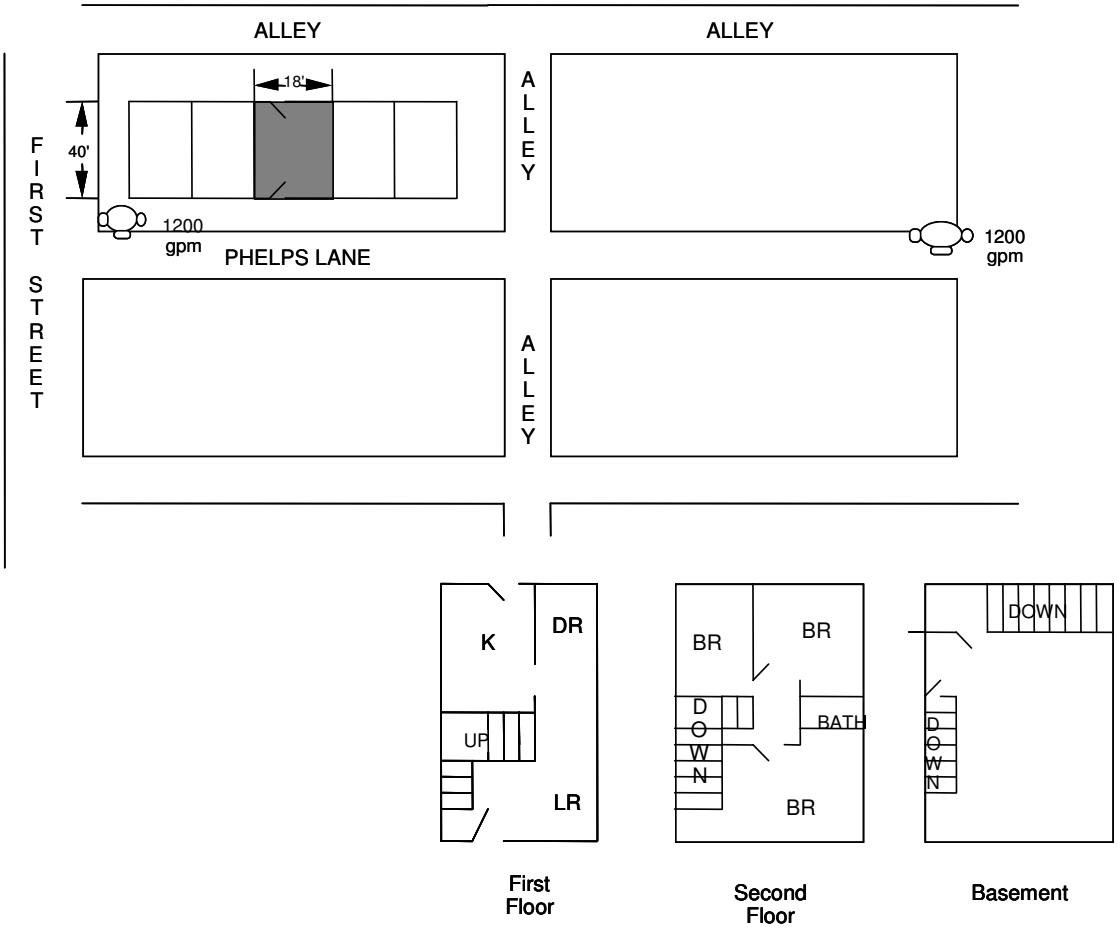
3. If you have determined that additional resources are needed to handle the incident, identify what additional resources you would request and how you anticipate they would fit into your organization once they arrive at the scene.

4. If Divisions and/or Groups are created, make sure they are used properly as described in this module.

5. Select a spokesperson to act as IC and give the group's report.

6. The flames are spreading and you have five minutes to put your organization together. Each group will have five minutes to give its report.

Activity 5.1 (cont'd)
Example Scenario
Plot Plan/Floor Plan



Activity 5.1 (cont'd)
Example Scenario
Quick Access Prefire Plan

Building Address: *100-108 Phelps Lane*

Building Description: *40' x 18', 2-story, ordinary (masonry wood-joist), common attic*

Roof Construction: *Ridge pole and rafter, 1" x 6" sheathing*

Floor Construction: *Beam and rafter, sheathing, hardwood floor*

Occupancy Type:	**Initial Resources Required**:
Townhouse	*2E, 1T, 1C 13 personnel*

Hazards to Personnel:
None out of ordinary

Location of Water Supply:	**Available Flow**:
Phelps Lane & 1st Street	*1,200 gpm*

	Estimated Fire Flow			
Level of Involvement	*25%*	*50%*	*75%*	*100%*
Estimated Fire Flow	*100*	*200*	*300*	*420*

Fire flow based on 1st floor of home with 2 exterior and 1 interior exposures

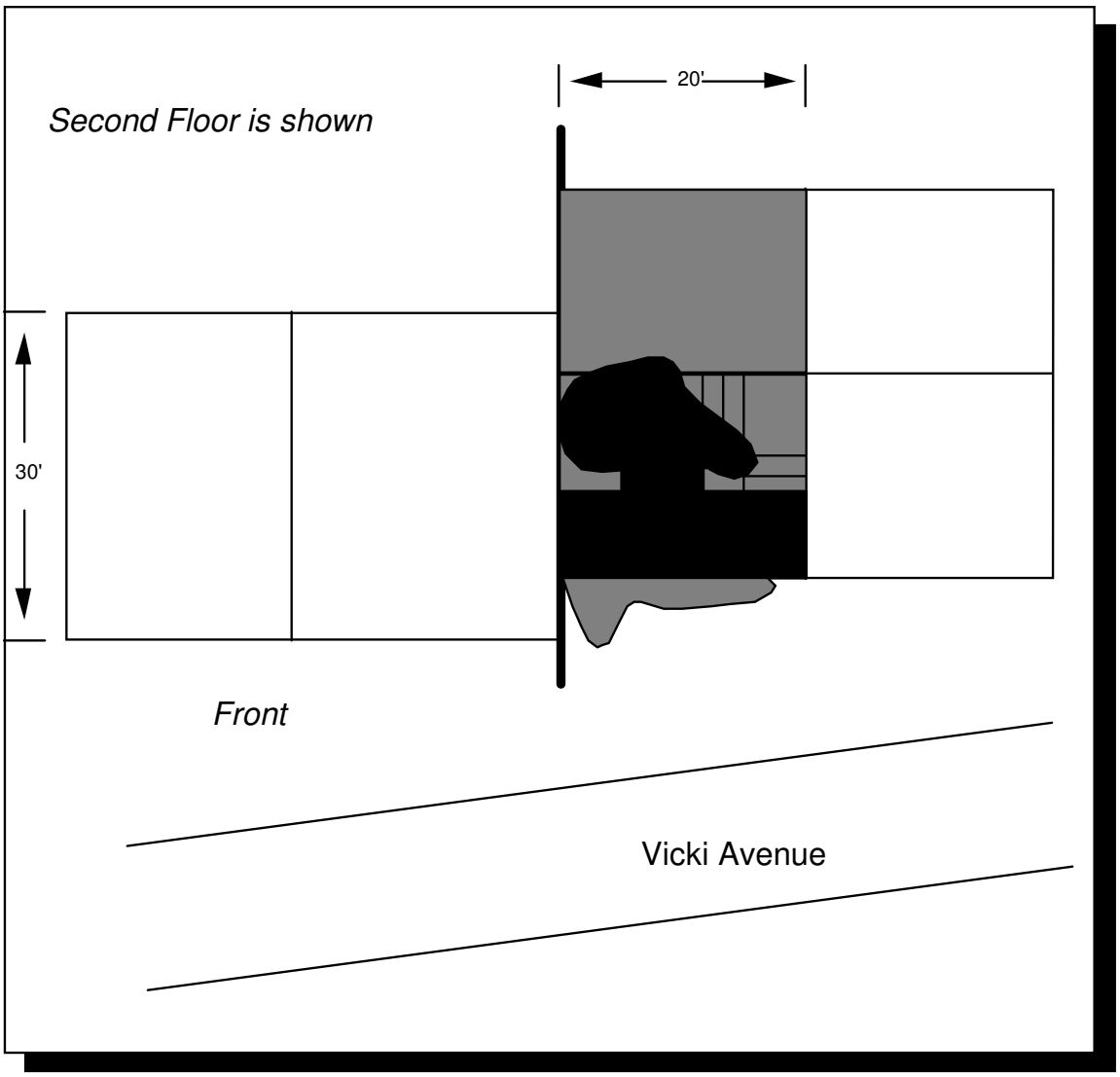
Fire Behavior Prediction:
Rapid horizontal and vertical spread

Predicted Strategies:
Rescue, ventilation, exposures, confinement, extinguishment

Problems Anticipated:
No more than usual for a dwelling

Standpipe:	**Sprinklers**:	**Fire Detection**:
None	*None*	*None*

Activity 5.1 (cont'd)
Plot Plan/Floor Plan
Scenario 1



Activity 5.1 (cont'd)
Scenario 1
Quick Access Prefire Plan

Building Address: *475 Vicki Avenue*

Building Description: *20' x 30', 2-story, wood frame*

Roof Construction: *Wood truss, gusset plate assembly*

Floor Construction: *Parallel chord wood truss covered with plywood*

Occupancy Type:	**Initial Resources Required:**
Apartment	*Determined by class*

Hazards to Personnel:
None more than usual for a dwelling

Location of Water Supply:	**Available Flow:**
Determined by class	*Determined by class*

	Estimated Fire Flow			
Level of Involvement	*25%*	*50%*	*75%*	*100%*
Estimated Fire Flow	*150*	*300*	*450*	*600*

Fire flow based on 2 floors and 2 exterior exposures

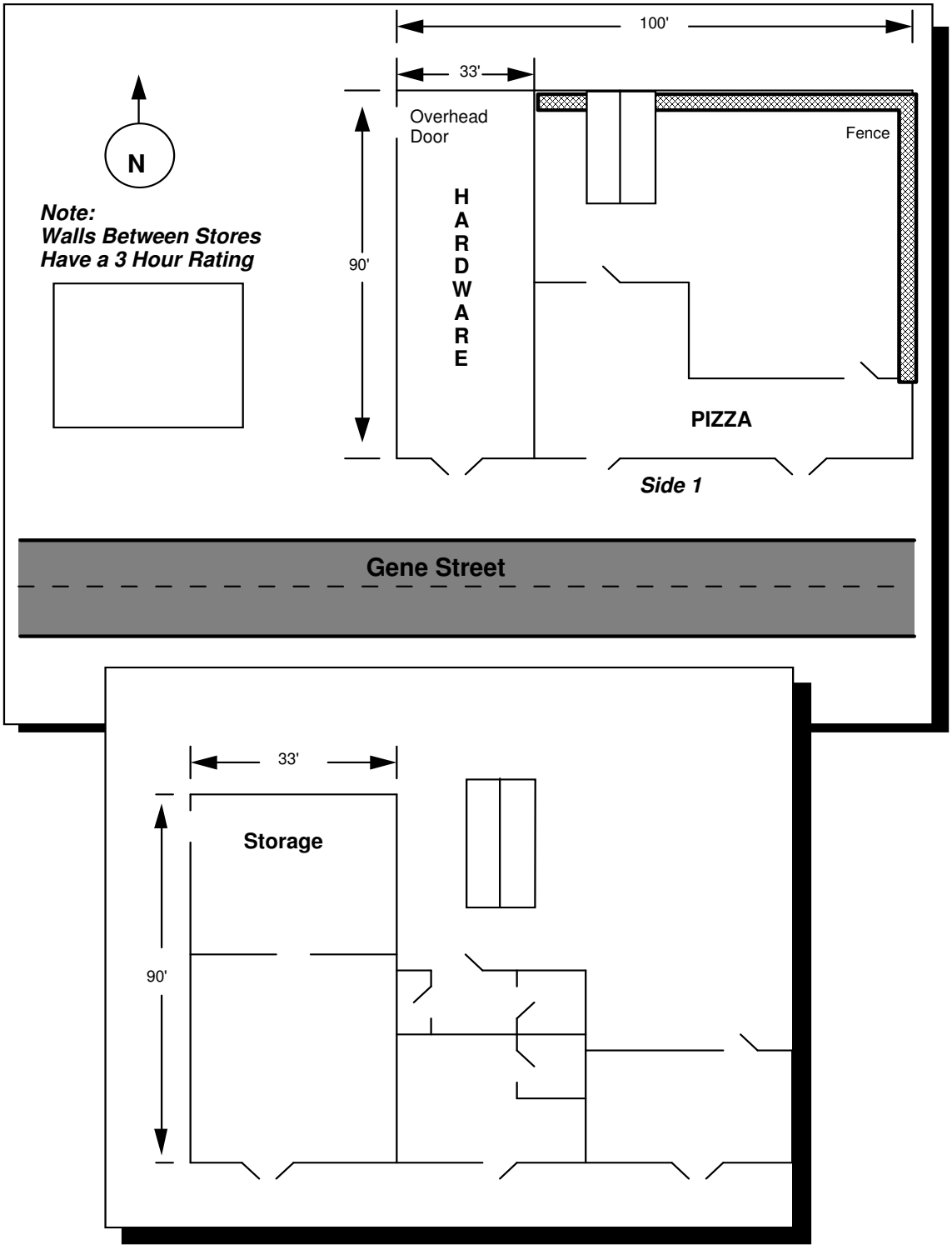
Fire Behavior Prediction:
Fast horizontal and vertical spread

Predicted Strategies:
Rescue, ventilation, confinement, extinguishment

Problems Anticipated:
Early collapse of floor and roof assemblies

Standpipe:	**Sprinklers:**	**Fire Detection:**
None	*None*	*None*

Activity 5.1 (cont'd)
Scenario 2
Plot Plan/Floor Plan



Activity 5.1 (cont'd)
Scenario 2
Quick Access Prefire Plan

Building Address: *1020 Gene Street*

Building Description: *2, 1-story, ordinary construction; largest fire area 33' x 90' firewall between occupancies*

Roof Construction: *Wooden 2" x 10" rafters, plywood, composition roof covering*

Floor Construction: *Concrete slab*

Occupancy Type:	**Initial Resources Required**:
Retail stores	*Determined by class*

Hazards to Personnel:
Pesticides, flammable/combustible liquids

Location of Water Supply:	**Available Flow**:
Determined by class	*Determined by class*

	Estimated Fire Flow			
Level of Involvement	*25%*	*50%*	*75%*	*100%*
Estimated Fire Flow	*375*	*750*	*1125*	*1500*

Fire flow of largest fire area--hardware store and 2 exposures

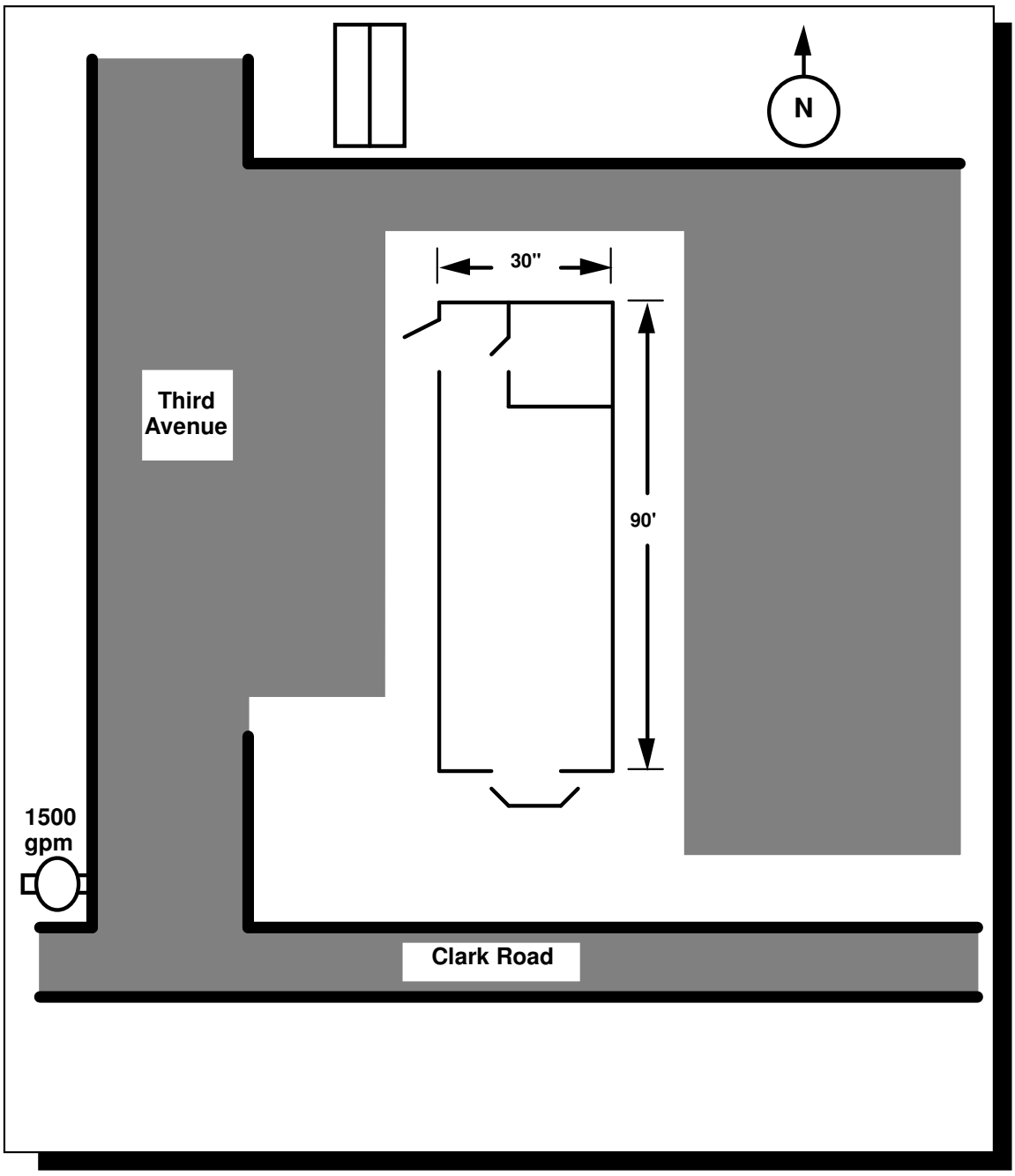
Fire Behavior Prediction:
Rapid horizontal spread within one occupancy

Predicted Strategies:
Confinement, ventilation, extinguishment

Problems Anticipated:
Poor rear access, limited horizontal ventilation

Standpipe:	**Sprinklers**:	**Fire Detection**:
None	*None*	*None*

Activity 5.1 (cont'd)
Scenario 3
Plot Plan/Floor Plan



Activity 5.1 (cont'd)
Scenario 3
Quick Access Prefire Plan

Building Address: *1590 Clark Road*

Building Description: *30' x 90', 1-story, ordinary construction with basement*

Roof Construction: *2" x 10" rafters, plywood, composition covering*

Floor Construction: *2" x 10" rafters, sheathing and hardwood flooring*

Occupancy Type:	**Initial Resources Required**:
Bar and Lounge	*Determined by class*

Hazards to Personnel:
None more than usual

Location of Water Supply:	**Available Flow**:
Corner of Clark Road and Third Ave.	*1,500 gpm*

	Estimated Fire Flow			
Level of Involvement	*25%*	*50%*	*75%*	*100%*
Estimated Fire Flow	*225*	*450*	*675*	*900*

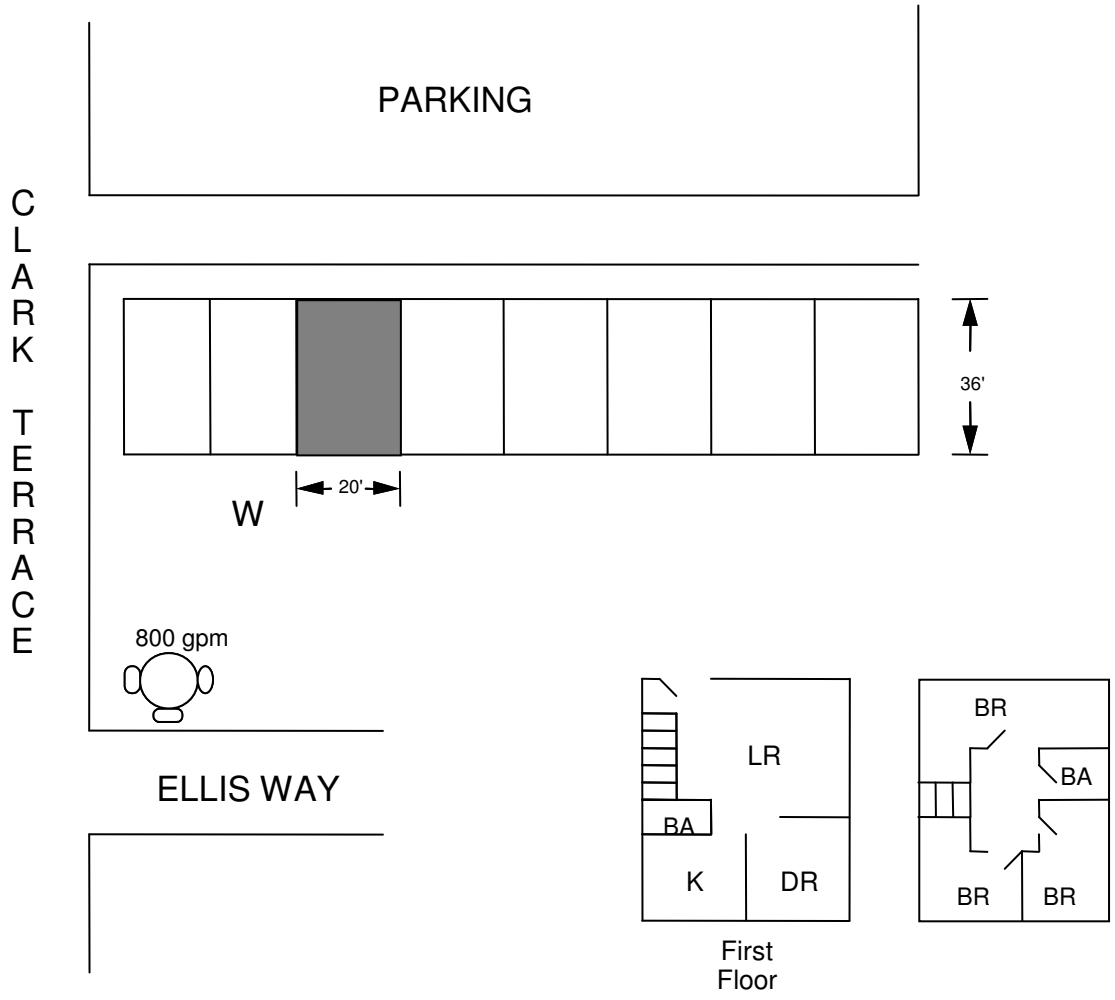
Fire Behavior Prediction:
Rapid horizontal fire spread

Predicted Strategies:
Confinement, ventilation, extinguishment

Problems Anticipated:
Interference by patrons

Standpipe:	**Sprinklers**:	**Fire Detection**:
None	*None*	*None*

Activity 5.1 (cont'd)
Scenario 4
Plot Plan/Floor Plan



Activity 5.1 (cont'd)
Scenario 4
Quick Access Prefire Plan

Building Address: *600-614 Clark Terrace*

Building Description: *20' x 36', 2-story, wood frame*

Roof Construction: *2" x 4", nailed, wood truss, common attic*

Floor Construction: *1st floor--concrete slab, 2nd floor--platform, 2" x 8" rafters, plywood sheathing*

Occupancy Type:	**Initial Resources Required**:
Townhouse	*Determined by class*

Hazards to Personnel:
None more than normal for a dwelling

Location of Water Supply:	**Available Flow**:
Clark Terrace and Ellis Way	*800 gpm*

	Estimated Fire Flow			
Level of Involvement	*25%*	*50%*	*75%*	*100%*
Estimated Fire Flow	*100*	*200*	*300*	*420*

Fire flow based on 1st floor of 1 house with 2 exterior and 1 interior exposures

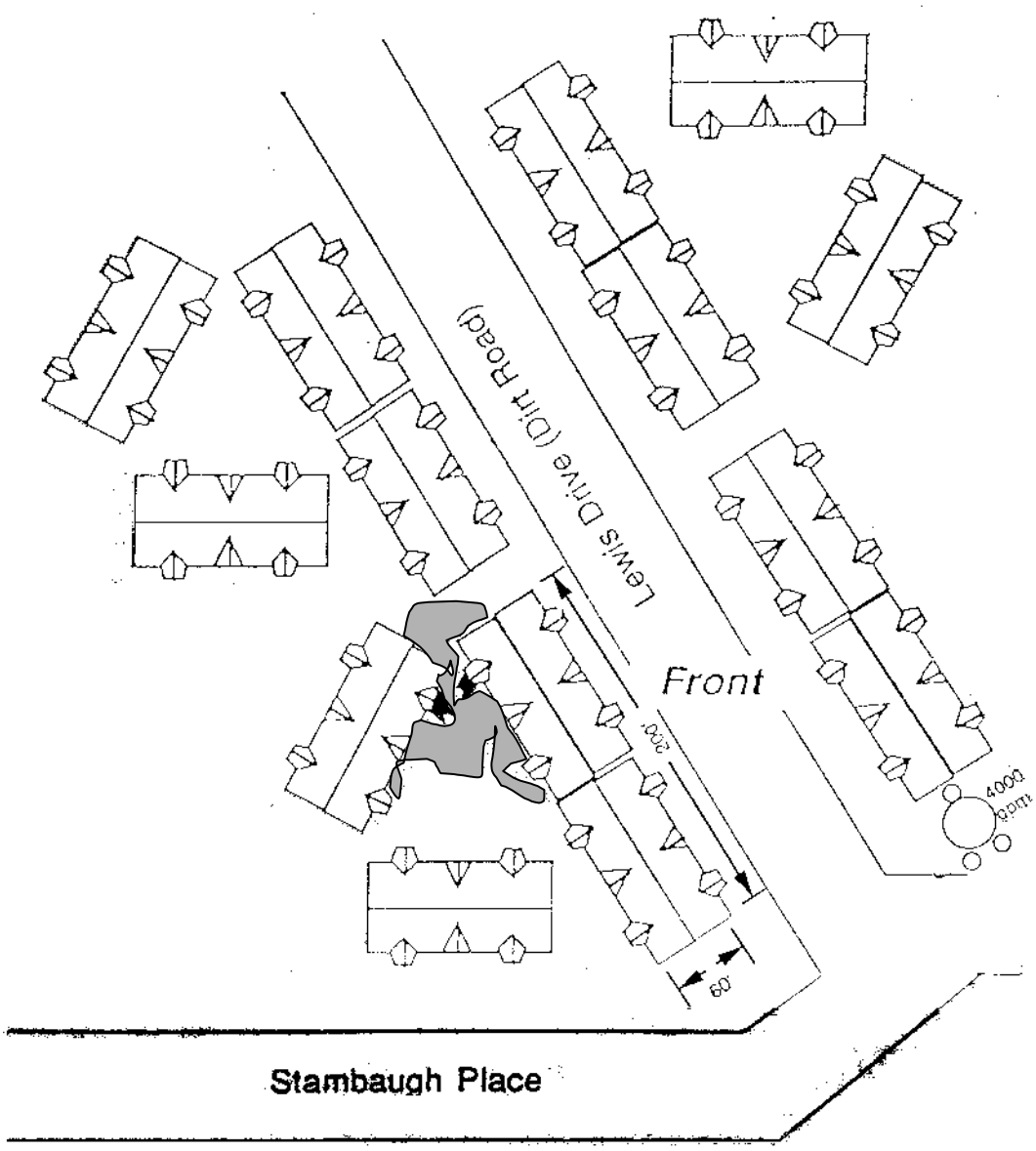
Fire Behavior Prediction:
Rapid horizontal and vertical spread

Predicted Strategies:
Rescue, exposures, ventilation, confinement, extinguishment

Problems Anticipated:
Limited access, limited egress, common attic

Standpipe:	**Sprinklers**:	**Fire Detection**:
None	*None*	*None*

Activity 5.1 (cont'd)
Scenario 5
Plot Plan/Floor Plan



Activity 5.1 (cont'd)
Scenario 5
Quick Access Prefire Plan

Building Address: *Lewis Drive and Stambaugh Place*

Building Description: *60' x 200', 3-story, wood frame (under construction)*

Roof Construction: *2" x 4" gusset plate wood truss, plywood sheathing*

Floor Construction: *1st floor--concrete slab, 2nd/3rd floor--parallel chord wood truss, plywood sheathing*

Occupancy Type:	**Initial Resources Required**:
Unoccupied apartments	*Determined by class*

Hazards to Personnel:
Radiant heat, early collapse, rapid fire spread--no drywall on walls

Location of Water Supply:	**Available Flow**:
Lewis Drive and Stambaugh Place	*4,000 gpm*

	Estimated Fire Flow			
Level of Involvement	*5%*	*10%*	*25%*	*100%*
Estimated Fire Flow	*750*	*1,500*	*3,750*	*15,000*

Fire flow on entire open 3-story building with exposure

Fire Behavior Prediction:
Rapid horizontal and vertical spread

Predicted Strategies:
Exposures, confinement, extinguishment

Problems Anticipated:
Limited access, unfinished roads

Standpipe:	**Sprinklers**:	**Fire Detection**:
None	*None*	*None*